

AUG 12 1988

Mr. Robert R. Loux, Executive Director  
Agency for Nuclear Projects  
Nuclear Waste Project Office  
State of Nevada  
Carson City, Nevada 89710

Dear Mr. Loux:

This letter is in response to your July 18, 1988 letter to Chairman Zech in which you communicate the State of Nevada's views and request the Nuclear Regulatory Commission's (NRC's) views on two Department of Energy (DOE) study plans, "Water Movement Test" and "Excavation Investigations," for characterizing Yucca Mountain for a high-level nuclear waste repository. We appreciate your apprising us of your concerns.

The NRC staff has completed its own review of the two study plans. Based on this review, the staff concluded both study plans were incomplete. Thus, the staff is not in a position to continue further review without additional information. The staff informed DOE of these findings on a July 28, 1988 conference call and by letter dated August 5, 1988 (Enclosure). DOE has agreed to reevaluate the two study plans in light of the NRC staff comments and to resubmit or appropriately amend the study plans such that we may continue our review.

If you have any questions concerning this letter or the enclosure, please contact John Linehan (301-492-3387) of the Division of High-Level Waste Management.

Sincerely,  
Original signed by  
Victor Stello  
Victor Stello, Jr.  
Executive Director for Operations

cc: R. Stein, DOE  
C. Gertz, DOE

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08/ /88

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Mr. Robert R. Loux, Executive Director  
Agency for Nuclear Projects  
Nuclear Waste Project Office  
State of Nevada  
Carson City, Nevada 89710

Dear Mr. Loux:

This letter is in response to your July 18, 1988 letter to Chairman Zech in which you communicate the State of Nevada's views on two Department of Energy (DOE) study plans for characterizing Yucca Mountain for a high-level nuclear waste repository and request the Nuclear Regulatory Commission's (NRC) views on those study plans. We appreciate your apprising us of your concerns.

The NRC staff has completed its own review of the two study plans and, based on the results of that review, has informed DOE by a July 28, 1988 conference call and a letter dated August 5, 1988 (Enclosure 1) that NRC finds both study plans incomplete and is not in a position to continue further review without additional information. DOE has agreed to reevaluate the two study plans in light of the NRC staff comments and to resubmit or appropriately amend the study plans such that we may continue our review.

If you have any questions concerning this letter or the enclosure, please contact John Linehan (301-492-3387) of the Division of High-Level Waste Management.

Sincerely,

Victor D. Stello, Jr.  
Executive Director for Operations

cc: R. Stein, DOE  
C. Gertz, DOE

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08/05/88

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ENCLOSURE  
UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555  
AUG 0 5 1988

Mr. Ralph Stein, Acting Associate Director  
Office of Systems Integration and Regulation  
Office of Civilian Radioactive Waste  
Management  
U. S. Department of Energy, RW-24  
Washington, D. C. 20545

Dear Mr. Stein:

On May 27, 1988, the Department of Energy (DOE) formally transmitted two study plans, "Water Movement Test" and "Excavation Investigations," to NRC for review and comment. The NRC staff has completed its Acceptance Review of those documents using the draft NRC staff Study Plan Review Plan (DSPRP). This review is consistent with the NRC-DOE agreements made at the May 7-8, 1986 meeting on Level of Detail for Site Characterization Plans and Study Plans. The DSPRP was provided to DOE on January 15, 1988.

As discussed during a July 28, 1988 conference call with representatives of DOE Headquarters and the Nevada Nuclear Waste Storage Investigations (NNWSI) Project, as a result of our Acceptance Review we have found both study plans to be incomplete and hence we are not in a position to continue further review. The concerns that we presented during the conference call are documented below. It is our understanding based upon that conference call that DOE has agreed to reevaluate the two study plans in light of the NRC staff concerns and to resubmit or appropriately amend them for NRC to continue its review.

The NRC staff concerns regarding the study plans fall into two categories, quality assurance (QA) and technical concerns. The QA concern, which applies to both study plans, is that they are considered to be quality level II, i.e., not considered by DOE to be important to waste isolation or safety. The development of study plans involves activities such as technical evaluations and determinations that are used to decide the kinds and amounts of testing that is to be done during site characterization. These evaluations are eventually going to be needed to support the use of data in licensing. It is the position of the staff that DOE needs to: (1) identify these activities in a defensible manner; (2) consider them important to safety or waste isolation; and (3) apply the QA measures prescribed in Subpart G of Part 60 to ensure that data developed from the implementation of a study plan are useable in licensing.

Among the technical concerns, one that applies to both study plans is that many of the references have not been provided to NRC. In order for the NRC staff to proceed with a technical review of key documents such as study plans or the Site Characterization Plan (SCP), it is necessary that all supporting references be available to NRC at or before the time of transmittal of the document for review.

With respect to the study plan "Excavation Investigations," a particular concern is that there is no discussion of the potential for significant interferences among tests or of interferences between tests and the

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exploratory shaft facility (ESF). Related to the concern is the fact that the location of the sequential drift mining experiment is not provided, making an evaluation of the potential for interferences with that test impossible. The concern about interferences with testing in the ESF has already been raised by NRC in the NRC staff review of DOE's Consultation Draft Site Characterization Plan (CDSCP), specifically, in CDSCP Point Paper Objection 3. This concern was also a topic of discussion at the July 18-19, 1988 NRC-DOE ESF meeting.

With respect to the "Water Movement Test," there is virtually no discussion of the applicability of the test results to: (1) specific performance assessment analyses; (2) support of other studies; (3) construction equipment and engineering system design and development; and (4) planning of other site characterization activities. The absence of such discussion, or a justification for why the test results are not applicable to these items, suggests a lack of integration of this study with the overall site characterization program, a suggestion that is further conveyed by (1) the study plan's failure to establish the relationship of the test to set performance goals and confidence levels and (2) the lack of reference to timing of this study relative to other site characterization studies.

Another concern regarding the "Water Movement Test" is the lack of information provided about technical procedures. The procedures are not listed. In addition, the procedures to be used are not identified as standard or nonstandard, nor are other details provided that should be included under the NRC-DOE agreement on level of detail for study plans.

Finally, the "Water Movement Test" refers to the possibility of conducting optional testing outside of the ESF but does not provide the rationale for the timing, duration, or number of such tests, nor does it identify or illustrate the locations of those tests. If such information is not currently available because planning for such tests is still preliminary, the study plan should clearly indicate that prior to embarking on that testing, DOE will submit revisions to this study plan including the information required under the NRC-DOE agreement on level of detail for study plans.

These are the most serious concerns that arose during the NRC staff acceptance review of the two study plans. There were also a number of other deficiencies that the staff noted when it evaluated the documents using the NRC-DOE agreement on level of detail for study plans. As DOE reevaluates the two study plans, we recommend that DOE review that agreement as a guide to what should be addressed in study plans and how the NRC will be reviewing them.

In order for the staff to efficiently allocate its resources, DOE should submit its schedule for providing the requested information by August 26, 1988. If you have any questions concerning this letter, please contact King Stablein (FTS 492-0446) of my staff.

Sincerely,



John Linehan, Acting Chief  
Operations Branch  
Division of High-Level Waste Management  
Office of Nuclear Material Safety  
and Safeguards